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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/811,359	03/16/2001	Taeyoung Yoon	49662 [72021]	7721
21874	7590	02/25/2004	EXAMINER	
EDWARDS & ANGELL, LLP P.O. BOX 55874 BOSTON, MA 02205			TRUONG, TAMTHOM NGO	
			ART UNIT	PAPER NUMBER
			1624	

DATE MAILED: 02/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/811,359	YOON ET AL.	
	Examiner	Art Unit	
	Tamthom N. Truong	1624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22,24-27,30,35,39-64 and 67 is/are pending in the application.
- 4a) Of the above claim(s) 17-22,32-34, 39-64 and 68 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3 and 5-8 is/are allowed.
- 6) ☒ Claim(s) 1,2,4,9-16,24-26 and 30 is/are rejected.
- 7) ☒ Claim(s) 27 and 35 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>6,8</u> . | 6) <input type="checkbox"/> Other: _____ |

FINAL ACTION

Applicant's election with traverse of Group 1 in the amendment of 12-04-03 is acknowledged. Applicant requests that Groups 3, 6, and 7 to be joined with Group 1 since in those groups, variables Ar, R_x, R_y, Y and Z are not (or do not contain) heterocyclic ring. In view of a newly found reference, which reads on the compounds of Groups 1, 3, and 6, the original **Group 1** is now revised to include Groups 3, and 6, **but not** group 7. Also, it is noted that the species in claims 39-64, and 68 actually belong to the genus of formula B recited in claim 17, which are **not** encompassed by the new reference. Therefore, **Group 7** is revised to include species claims 39-64, and 68. Thus, claims 1-16 (in part), 24-27 (in part), 30, 35 are pending while claims 17-22, 32-34, 39-64, and 68 are **withdrawn** from consideration as being drawn to a non-elected subject matter.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1, 2, 4, 9-16, 24-26, and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by **Brunner** (US 4,648,896). On columns 15 and 16, Table 1 lists several

compounds that are embraced by the formulae in claims 1, 2, and 9 (e.g., compounds # 55-57, 64, 66, 68) – particularly, when the claimed formulae have the following substituents:

- i. R_1 and R_3 are halogens;
- ii. R_2 is mono- or dialkylamino, alkoxy, or alkylthio;
- iii. R_x and R_y are hydrogen or alkyl groups;
- iv. Ar is a phenyl group substituted with an alkyl, an alkoxy, or a halogen group.

2. That is, compounds #55-57, 64, 66, and 68 read on the formulae in the instant claims 1 and 2 when Ar is phenyl which is mono-, di-, or tri-substituted; R_1 and R_3 are halogen, and R_2 is mono- or dialkylamino, alkoxy, alkylthio. The instant claim 4 depends on the anticipated claim 1, and thus is also anticipated. Compounds #55, 56, and 64 read on the formula in the instant claim 9 when R_x and R_y are hydrogen or alkyl groups; R_1 and R_3 are halogen; Ar is phenyl substituted with R_C which is an alkoxy or an alkyl group. The instant claims 10-14 depend on the anticipated claim 9 and recite the same limitations, and thus are also anticipated. Compounds #57, and 66 read on the formula in claims 15 when R_x is an alkyl group; R_1 and R_3 are halogen; Ar is phenyl substituted with R_C which is a halogen or an alkynyl group. The instant claim 16 depends on claim 15, and also recite halogen for R_1 and R_3 , and thus, anticipated as well.

Note, although claims 24-26 and 30 recite the IC_{50} values, and the statistically significant activity, said limitations do not impart patentability since it is inherent that compounds of similar structures will exhibit the same biological activity.

Claim Objections

3. Claims 27 and 35 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Allowable Subject Matter

4. Claims 3, and 5-8 are allowed. Since the compounds of Brunner require two halogen groups on the pyrimidinyl ring whereas the compounds in claims 3, and 5-8 do not have halogen groups on the pyrimidinyl ring.

Applicant's amendment **necessitated** the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Art Unit: 1624

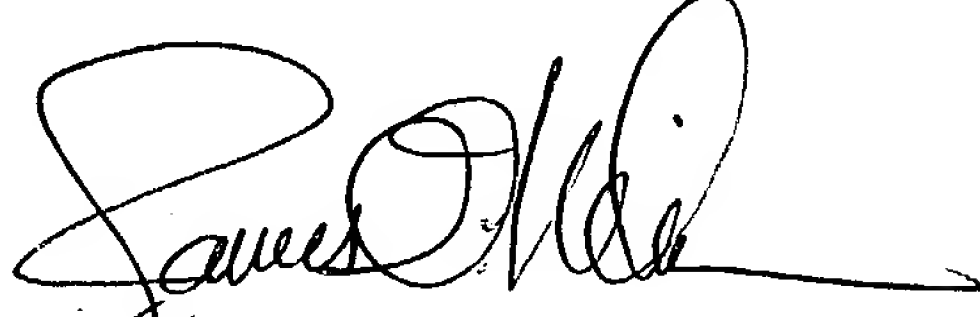
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tamthom N. Truong whose telephone number is 571-272-0676. The examiner can normally be reached on M-F (~10 am ~ 6:30 pm) starting from February 08th, 2004.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mukund Shah can be reached on 703-308-4716. If you are unable to reach Dr. Shah within a 24 hour period, please contact James O. Wilson, Acting SPE of 1624, at 571-272-0661. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-4556 for regular communications and 703-308-4556 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1235.

T. Truong

February 23, 2004



JAMES O. WILSON
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600